**NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ DATE: \_\_\_\_\_\_\_\_\_\_\_ PER. \_\_\_\_**

**WHAT IS SCIENTIFIC METHOD?**

You may not realize it, but you do problem-solving every day. You do not always thing about how to solve a particular problem. You solve problems in sort of a natural way; a way that seems to make sense.

For example, suppose your put your key into your house door and try to turn it, but it does not budge. You wonder what’s wrong. You examine the key to make certain that is it he correct one. Then you try again. The key still does not turn. What next? You might “jiggle” the key or, you might pull back on the door knob as you try other methods until the problem is solved.

Without knowing it, you solve problems very much like a scientist does. You use the scientific method. The scientific method is a guide used to solve problems. It involves asking questions, making observations, and trying things out in an orderly way. Scientists use certain stems to solve problems. The steps of the scientific method are:

1. State (Identify) the Problem - This is the question you want to answer.

2. Gather Information – Research - Collect information or evidence that is related to your problem.

3. State a Hypothesis - This is a statement based on facts (research) that is ONE possible solution to your problem.

4. Test the Hypothesis - Experiments are done to either support or not support your hypothesis

5. Analyze Data - Observations of experiments and data (facts) gotten from the experiment are recorded, organized and analyzed.

6. State a Conclusion – Your results are summarized

(“interpreted”). You would state whether or not your hypothesis had been supported.

7. Repeat the Work – The experiments are repeated, asking another question and changing the variable tested in the experiments.

**Part A: Complete each statement using a term or terms from the list below. Write your answers in the spaces provided**.

supports observe different problems

question already known data scientific method

senses steps

1. To test a hypothesis, scientists may \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ natural events.

2. When scientists research, they may find out what is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ about a problem.

3. Your \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ gather information.

4. A conclusion states whether or not data \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ a hypothesis.

5. A problem is usually state as a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

6. Scientists use certain \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to solve a problem.

7. You solve \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ much like scientists do.

8. Different problems can be solved in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ways.

9. A guide used to solve problems is called the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

10. Scientists used tables & graphs to organize \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Part B: Read the paragraph below and answer the questions that follow.**

Jennifer has never eaten asparagus. She is afraid that it might make her sick. At dinner, she eats some. She likes the taste, but soon she starts to feel ill. Jennifer concludes that asparagus makes her sick.

11. Why might Jennifer’s conclusion be ***incorrect***? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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12. What could Jennifer do to further test her conclusion? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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